



Customer No.: 07278

Docket No.: 04305/100H154-US2

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

Henrik Clausen et al.

Serial No.: 10/705,401

Filed: November 10, 2003

For: METHODS TO IDENTIFY AGENTS MODULATING FUNCTIONS OF
POLYPEPTIDE GALNAC-TRANSFERASES, PHARMACEUTICAL
COMPOSITIONS COMPRISING SUCH AGENTS AND THE USE OF SUCH
AGENTS FOR PREPARING MEDICAMENTS

October 8, 2004

INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

This Information Disclosure Statement is submitted in accordance with 37 C.F.R. 1.97, 1.98, and it is requested that the information set forth in this statement and in the listed documents be considered during the pendency of the above-identified application, and any other application relying on the filing date of the above-identified application or cross-referencing it as a related application.

1. This IDS should be considered, in accordance with 37 C.F.R. 1.97, as it is filed:(Check one of the boxes A-D)

- ☐ A. Within three months of the filing date of the above-identified national application or within three months of the entry into the national stage of the above-identified international application.
- ☒ B. before the mailing date of a first office action on the merits, or a first office action after filing a request for continued examination.

Docket No. 04305/100H154-US2

- ☐ C. after (A) and (B) above, but before the mailing date of a final rejection, a notice of allowance, or any other action that closes prosecution, and Applicants have made the necessary statement in box "i" below or paid the necessary fee in box "ii" below.

(check one of the boxes "i" and "ii" below:)

- ☐ i. Counsel states that, upon information and belief, each item of information listed herein was either (a) cited in a communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this IDS; or (b) was not cited in a communication from a foreign patent office in a counterpart foreign application and, to the knowledge of undersigned after making reasonable inquiry, was not known to any individual designated in 1.56(c) more than three months prior to the filing of this IDS.
- ☐ ii. A check for the fee set forth in 1.17(p), presently believed to be \$180, is enclosed.
- ☐ D. after (A), (B) and (C) above, but before payment of the issue fee: Counsel states that, upon information and belief, each item of information listed herein was either (i) cited in a communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the IDS; or (ii) was not cited in a communication from a foreign patent office in a counterpart foreign application and, to the knowledge of the undersigned after making reasonable inquiry, was not known to any individual designated in 1.56(c) more than three months prior to the filing of this IDS.
- ☐ i. A check for the fee set forth in 1.17 (p), presently believed to be \$180, is enclosed.

2. In accordance with 37 C.F.R. 1.98, this IDS includes a list (e.g., form PTO/SB/08) of all patents, publications, or other information submitted for consideration by the office, either incorporated into this IDS or as an attachment hereto. A copy of each document listed is attached, except as explained below.

(check boxes A, B and/or C and fill in blanks, if appropriate.).

- ☐ A. Pursuant to the Notice issued by the United States Patent and Trademark Office dated July 11, 2003 waiving the requirements of 37 C.F.R. § 1.98(a)(2)(i), a copy/copies of the United States Patent on PTO/SB08 is/are not being submitted.
- ☐ B. Document(s) _____ is (are) deemed substantially cumulative to document(s) _____, and, in accordance with 1.98(c), only a copy of each of the latter documents is enclosed.
- ☐ C. Certain documents were previously cited by or submitted to the Office in the following prior applications, which are relied upon under 35 U.S.C. 120:

[SERIAL NO. & FILING DATE].

Applicant identifies these documents by attaching hereto copies of the forms PTO-892 and PTO/SB08 from the files of the prior application(s) or a fresh PTO/SB/08 listing these documents, and request that they be considered and made of record in accordance with 1.98(d). Per 37 CFR 1.98(d), copies of these documents need not be filed in this application.

☐ 3. Document(s) _____ are not in the English language. In accordance with 1.98(c), Applicant states:

- ☐ An English translation of each document (or of the pertinent portions thereof), or a copy of each corresponding English-language patent or application is enclosed.
- ☐ A concise explanation of the relevance of document(s) _____ is found in the attached search report (see MPEP § 609 A(3)x).
- ☐ A concise explanation of the relevance of document(s) _____ is set forth as follows: [Insert concise explanation of relevance]
- ☐ A concise explanation of the relevance of document(s) _____ can be found on page(s) _____ of the specification.
- ☐ A concise explanation of document(s) _____ can be found on the attached sheet.

☐ 4. No explanation of relevance is necessary for documents in the English language (see MPEP § 609 A(3)).

☐ 5. Other information being provided for the examiner's consideration follows: [A/An _____ Search Report, dated _____, which issued during the prosecution of _____ Application No. _____ which corresponds to the present application.]

6. In accordance with 37 C.F.R. 1.97(g) and (h), the filing of this IDS should not be construed as a representation that a search has been made or that information cited is, or is considered to be, material to patentability as defined in §1.56 (b), or that any cited document listed or attached is (or constitutes) prior art. Unless other-wise indicated, the date of publication indicated for an item is taken from the face of the item and Applicant reserves the right to prove that the date of publication is in fact different.

CROSS REFERENCE UNDER 37 C.F.R. §1.78 TO RELATED APPLICATIONS

Pursuant to 37 C.F.R. § 1.78, Applicant notes that the above-identified patent application may be related to the following U.S. Patent Applications:

(1) U.S. Patent Application Serial No 10/292,896, filed November 12, 2002.

Early and favorable consideration is earnestly solicited.

Respectfully submitted,

October 8, 2004



Heather Morehouse Ettinger, Ph.D.

Registration No. 51,658

Attorney for Applicants

DARBY & DARBY P.C.
805 Third Avenue
New York, N.Y. 10022
(212) 527-7700



PTO/SB/08a/b (08-03)

Approved for use through 07/31/2006. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/B/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use as many sheets as necessary)				Complete if Known	
				Application Number	10/705,401-Conf. #4414
				Filing Date	November 10, 2003
				First Named Inventor	Henrik Clausen
				Art Unit	N/A
				Examiner Name	N/A
Sheet	1	of	5	Attorney Docket Number	04305/100H154-US2

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. ¹	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code ² (if known)			
	1	US-5,268,364-B1	12-07-1993	Kojima et al.	

FOREIGN PATENT DOCUMENTS						
Examiner Initials*	Cite No. ¹	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁶
		Country Code ³ -Number ⁴ -Kind Code ⁵ (if known)				
	2	WO-99/64378-A2	12-16-1999	Slycodesign Inc.		
	3	WO-99/12944-A2	03-18-1999	Glycim OY		

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹ Applicant's unique citation designation number (optional). ² See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city & d- and/or country where published.	T ²
	4	Abstract. Publication No. WO-95/26969 A1, New Derivative Inhibit Cell Adhesive Galactosyl Fucosyl Group Treat Inflammation Asthma Rheumatism Cancer.	
	5	Soudan, et al., "Capillary zone electrophoresis and MALDI-mass spectrometry for the monitoring of in vitro O-glycosylation of a threonine/serine-rich MUC5AC hexadecapeptide", Journal of Chromatography B, 1999, Vol., 729, pp. 65-74.	
	6	Byrd, J.C., et al., "Inhibition of Mucin Synthesis by Benzyl- α -GalNAc in KATO III Gastric Cancer and Caco-2 Colon Cancer Cells", European Journal of Cancer, 1995, Vol. 31A, No. 9, pp. 1498-1505.	
	7	Homa, Fred L., et al., "Isolation and Expression of a cDNA Clone Encoding a Bovine UDP-GalNAc: Polypeptide N-Acetylgalactosaminyltransferase", The Journal of Biological Chemistry, June 15, 1993, Vol. 268, No. 17, pp. 12609-12616.	
	8	Toba, Shinya, et al., "Brain-specific expression of a novel human UDP-GalNAc: polypeptide N-acetylgalactosaminyltransferase (GalNAc-T9) ¹ ", Biochimica et Biophysica Acta, 2000, Vol. 1493, pp. 264-268.	
	9	White, Kenneth E., et al., "Molecular cloning of a novel human UDP-GalNAc:polypeptide N-acetylgalactosaminyltransferase, GalNAc-T8, and analysis as a candidate autosomal dominant hypophosphatemic rickets (ADHR) gene", Gene, 2000, Vol. 246, pp. 347-356.	
	10	Bennett, Eric Paul, et al., "Cloning and Characterization of a Close Homologue of Human UDP-N-acetyl- α -D-galactosamine:Polypeptide N-Acetylgalactosaminyltransferase-T3, Designated GalNAc-T6", The Journal of Biological Chemistry, September 3, 1999, Vol. 274, No. 36, pp. 25362-25370.	
	11	Muller, Stefan, et al., "Recombinant MUC1 Probe Authentically Reflects Cell-specific O-Glycosylation Profiles of Endogenous Breast Cancer Mucin", The Journal of Biological Chemistry, July 19, 2002, Vol. 277, No. 29, pp. 26103-26112.	
	12	Gouyer, V., et al., "Inhibition of the Glycosylation and Alteration in the Intracellular Trafficking of Mucins and Other Glycoproteins by GalNAc-O-BN in Mucosal Cell Lines: An Effect Medicated Through the Intracellular Synthesis of Complex GalNAc-O-BN Oligosaccharides",	

Examiner	Date Considered
----------	-----------------

BEST AVAILABLE COPY

Substitute for form 1449A/B/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(Use as many sheets as necessary)</i>			Complete if Known		
			Application Number	10/705,401-Conf. #4414	
			Filing Date	November 10, 2003	
			First Named Inventor	Henrik Clausen	
			Art Unit	N/A	
			Examiner Name	N/A	
Sheet	2	of	5	Attorney Docket Number	04305/100H154-US2

		Frontiers in Bioscience, October 1, 2001, Vol. 6, pp. d1235-1244.	
13	Tenno, Mari, et al., "The Lectin Domain of UDP-GalNAc:Polypeptide N-Acetylgalactosaminyltransferase 1 is Involved in O-Glycosylation of a Polypeptide with Multiple Acceptor Sites", The Journal of Biological Chemistry, December 6, 2002, Vol. 277, No. 49, pp. 47088-47096.		
14	Hagen, Kelly G. Ten, et al., "Cloning and Characterization of Ninth Member of the UDP-GalNAc:Polypeptide N-Acetylgalactosaminyltransferase Family, ppGaNTase-T9", The Journal of Biological Chemistry, May 18, 2001, Vol. 276, No. 20, pp. 17395-17404.		
15	Schwientek, Tilo, et al., "Functional Conservation of Subfamilies of Putative UDP-N-acetylgalactosamine:Polypeptide N-Acetylgalactosaminyltransferases in Drosophila, Caenorhabditis elegans, and Mammals", The Journal of Biological Chemistry, June 21, 2002, Vol. 277, No. 25, pp. 22623-22638.		
16	Hassan, Helle, et al., "The Lectin Domain of UDP-N-acetyl-D-galactosamine:Polypeptide N-acetylgalactosaminyltransferase-T4 Directs Its Glycopeptide Specificities", The Journal of Biological Chemistry, December 8, 2000, Vol. 275, No. 49, pp. 38197-38205.		
17	Gobom, Johan, et al., "Sample Purification and Preparation Technique Based on Nano-scale Reversed-Phase Columns for the Sensitive Analysis of Complex Peptide Mixtures by Matrix-assisted Laser Desorption/Ionization Mass Spectrometry", Journal of Mass Spectrometry, 1999, Vol. 34, pp. 105-116.		
18	Mirgorodskaya, Ekaterina, et al., "Partial Vapor-Phase Hydrolysis of Peptide Bonds: A Method for Mass Spectrometric Determination of O-Glycosylated Sites in Glycopeptides", Analytical Biochemistry, 1999, Vol. 269, pp. 54-65.		
19	Birken, Steven, et al., "Isolation and Amino Acid Sequence of COOH-terminal Fragments from the B Subunit of Human Choriogonadotropin", The Journal of Biological Chemistry, August 10, 1977, Vol. 252, No. 15, pp. 5386-5392.		
20	Hill, Hoyle D., Jr., et al., "Ovine Submaxillary Mucin", The Journal of Biological Chemistry, June 10, 1977, Vol. 252, No. 11, pp. 3799-3804.		
21	Hardy, Daniel M., et al., "A Sperm Membrane Protein that Binds in a Species-specific Manner to the Egg Extracellular Matrix is Homologous to von Willebrand Factor", The Journal of Biological Chemistry, November 3, 1995, Vol. 270, No. 44, pp. 26025-26028.		
22	Matsuura, Hidemitsu, et al., "An a-N-Acetylgalactosamylation at the Threonine Residue of a Defined Peptide Sequence Creates the Oncofetal Peptide Epitope in Human Fibronectin", The Journal of Biological Chemistry, June 25, 1989, Vol. 264, No. 18, pp. 10472-10476.		
23	Bobek, Libuse A., et al., "Molecular Cloning, Sequence, and Specificity of Expression of the Gene Encoding the Low Molecular Weight Human Salivary Mucin (MUC7)", The Journal of Biological Chemistry, September 25, 1993, Vol. 268, No. 27, pp. 20563-20569.		
24	Gum, James R., Jr., et al., "Molecular Cloning of Human Intestinal Mucin (MUC2) cDNA", The Journal of Biological Chemistry, January 28, 1994, Vol. 269, No. 4, pp. 2440-2446.		
25	Albone, Earl F., et al., "Molecular Cloning of a Rat Submandibular Gland Apomucin", The Journal of Biological Chemistry, June 17, 1994, Vol. 269, No. 24, pp. 16845-16852.		
26	Day, Philip J., et al., "Structure and Activity of an Active Site Substitution of Ricin A Chain", Biochemistry, 1996, Vol. 35, pp. 11098-11103.		
27	Wandall, Hans H., et al., "Substrate Specificities of Three Members of the Human UDP-N-Acetyl-α-D-galactosamine:Polypeptide N-Acetylgalactosaminyltransferase Family, GalNAc-T1, -T2, and -T3", The Journal of Biological Chemistry, September 19, 1997, Vol. 272, No. 38, pp. 23503-23514.		
28	Sako, Dianne, et al., "A Sulfated Peptide Segment at the Amino Terminus of PSGL-1 is Critical for P-Selectin Binding", Cell, October 20, 1995, Vol. 83, pp. 323-331.		
29	Reis, Celso A., et al., "Characterization of a Panel of Monoclonal Antibodies Using GalNAc Glycosylated Peptides and Recombinant MUC1", Tumor Biol., 1998, Vol. 19, Supplement 1, pp. 127-133.		

Examiner

Date

Considered

BEST AVAILABLE COPY

Substitute for form 1449A/B/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(Use as many sheets as necessary)</i>			Complete if Known		
			Application Number	10/705,401-Conf. #4414	
			Filing Date	November 10, 2003	
			First Named Inventor	Henrik Clausen	
			Art Unit	N/A	
			Examiner Name	N/A	
Sheet	3	of	5	Attorney Docket Number	04305/100H154-US2

30	Colley, Karen J., "Golgi localization of glycosyltransferases: more questions than answers", <i>Glycobiology</i> , 1997, Vol. 7, No. 1, pp. 1-13.
31	Dohi, Taeko, et al., "Detection of N-Acetylgalactosaminyltransferase mRNA Which Determines Expression of Sda Blood Group Carbohydrate Structure in Human Gastrointestinal Mucosa and Cancer", <i>Int. J. Cancer</i> , 1996, Vol. 67, pp. 626-631.
32	Jentoft, Neil, "Why are proteins O-glycosylated?", <i>Tibs</i> , August 1990, Vol. 15, pp. 291-294.
33	Rose, Mary C., "Mucins: structure, function, and role in pulmonary diseases", <i>Invited Review</i> , pp. L413-L429.
34	Mandel, Ulla, et al., "Simple Mucin-Type Carbohydrates in Oral Stratified Squamous and Salivary Gland Epithelia", <i>The Journal of Investigative Dermatology</i> , October 1991, Vol. 97, No. 4, pp. 713-721.
35	Taylor-Papadimitriou, Joyce, et al., "Exploiting altered glycosylation patterns in cancer: progress and challenges in diagnosis and therapy", <i>Titech</i> , June 1994, Vol. 12, pp. 227-233.
36	Girling, Anne, et al., "A Core Protein Epitope of the Polymorphic Epithelial Mucin Detected by the Monoclonal Antibody SM-3 is Selectively Exposed in a Range of Primary Carcinomas", <i>Int. J. Cancer</i> , 1989, Vol. 43, pp. 1072-1076.
37	Scharfman, A., et al., "Interactions between human respiratory mucins and pathogens", <i>Biochemical Society Transactions</i> , 1995, Vol. 23, pp. 836-839.
38	Breton, Christelle, et al., "Structure/function studies of glycosyltransferases", <i>Carbohydrates and glycoconjugates</i> , pp. 563-571.
39	Trombetta, E. Sergio, et al., "Lectins as chaperones in glycoprotein folding", <i>Carbohydrates and glycoconjugates</i> , pp. 587-592.
40	Hazes, Bart, "The (QxW) ₃ domain: A flexible lectin scaffold", <i>Protein Science</i> , 1996, Vol. 5, pp. 1490-1501.
41	Muller, Stefan, et al., "Localization of O-Glycosylation Sites on Glycopeptide Fragments from Lactation-associated MUC1", <i>The Journal of Biological Chemistry</i> , October 3, 1997 Vol. 272, No. 4, pp. 24780-24793.
42	Ramakrishnan, Boopathy, et al., "Structure-based Design of B1, 4-Galactosyltransferase I (B4Gal-T1) with Equally Efficient N-Acetylgalactosaminyltransferase Activity", <i>The Journal of Biological Chemistry</i> , June 7, 2002, Vol. 277, No. 23, pp. 20833-20839.
43	Ramakrishnan, B., et al., "Crystal Structure of B1, 4-Galactosyltransferase Complex with UDP-Gal Reveals an Oligosaccharide Acceptor Binding Site", <i>J. Mol. Biol.</i> , 2002, Vol. 318, pp. 491-502.
44	Sasaki, Hiroshi, et al., "Carbohydrate Structure of Erythropoietin Expressed in Chinese Hamster Ovary Cells by a Human Erythropoietin cDNA", <i>The Journal of Biological Chemistry</i> , September 5, 1987, Vol. 262, No. 25, pp. 12059-12076.
45	Ryuko, Kanji, et al., "Characterization of a New MUC1 Monoclonal Antibody (VU-2-G7) Directed to the Glycosylated PDTR Sequence of MUC1", <i>Tumor Biology</i> , 2000, Vol. 21, pp. 197-210.
46	Burdick, Michael D., "Oligosaccharides Expressed on MUC1 Produced by Pancreatic and Colon Tumor Cell Lines", <i>The Journal of Biological Chemistry</i> , September 26, 1997, Vol. 272, No. 39, pp. 24198-24202.
47	Mandel, Ulla, et al., "Expression of polypeptide GalNAc-transferases in stratified epithelia and squamous cell carcinomas: immunohistological evaluation using monoclonal antibodies to three members of the GalNAc-transferase family", <i>Glycobiology</i> , 1999, Vol. 9, No. 1, pp. 43-52.
48	Jorgensen, Charlotte S., et al., "Polypeptide binding properties of the chaperone calreticulin", <i>Eur. J. Biochem.</i> , 2000, Vol. 267, pp. 2945-2954.
49	Sorensen, Tina, et al., "UDP-N-acetyl-α-D-galactosamine:polypeptide N-Acetylgalactosaminyltransferase: Identification and Separation of Two Distinct Transferase Activities", <i>The Journal of Biological Chemistry</i> , October 13, 1995, Vol. 270, No. 41, pp.

Examiner

Date

Considered

BEST AVAILABLE COPY

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/B/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(Use as many sheets as necessary)</i>				Complete if Known	
				Application Number	10/705,401-Conf. #4414
				Filing Date	November 10, 2003
				First Named Inventor	Henrik Clausen
				Art Unit	N/A
				Examiner Name	N/A
Sheet	4	of	5	Attorney Docket Number	04305/100H154-US2

	24166-24173.
50	Van den Steen, Philippe, et al., "Concepts and Principles of O-Linked Glycosylation", Critical Reviews in Biochemistry and Molecular Biology, 1998, Vol. 33, No. 3, pp. 151-208.
51	Bennett, Eric Paul, et al., "cDNA Cloning and Expression of a Novel Human UDP-N-acetyl- α -D-galactosamine", The Journal of Biological Chemistry, 1996, Vol. 271, No. 29, pp. 17006-17012.
52	White, Thayer, et al., "Purification and cDNA Cloning of a Human UDP-N-acetyl- α -D-galactosamine:polypeptide N-Acetylgalactosaminyltransferase", The Journal of Biological Chemistry, October 13, 1995, Vol. 270, No. 41, pp. 24156-24165.
53	Ulloa, Fausto, et al., "GalNAc- α -O-benzyl Inhibits Sialylation of de Novo Synthesized Apical but Not Basolateral Sialoglycoproteins and Blocks Lysosomal Enzyme Processing in a Post-trans-Golgi Network Compartment", The Journal of Biological Chemistry, June 23, 2000, Vol. 275, No. 25, pp. 18785-18793.
54	Yeaman, Charles, et al., "The O-glycosylated Stalk Domain is Required for Apical Sorting of Neurotrophin Receptors in Polarized MDCK Cells", The Journal of Cell Biology, November 17, 1997, Vol. 139, No. 4, pp. 929-940.
55	Alfalah, Marwan, et al., "O-linked glycans mediate apical sorting of human intestinal sucrase-isomaltase through association with lipid rafts", Current Biology, 1999, Vol. 9, No. 11, pp. 593-596.
56	Huet, Guillemette, et al., "GalNAc- α -O-benzyl Inhibits NeuAca2-3 Glycosylation and Blocks the Intracellular Transport of Apical Glycoproteins and Mucus in Differentiated HT-29 Cells", The Journal of Cell Biology, 1998, Vol. 141, pp. 1311-1322.
57	Kuan, Shih-Fan, et al., "Inhibition of Mucin Glycosylation by Aryl-N-acetyl- α -galactosaminides in Human Colon Cancer Cells", The Journal of Biological Chemistry, November 15, 1989, Vol. 264, No. 32, pp. 19271-19277.
58	Thomsson, Kristina A., et al., "Different O-glycosylation of respiratory mucin glycopeptides from a patient with cystic fibrosis", Glycoconjugate Journal, 1998, Vol. 15, pp. 823-833.
59	Taylor-Papadimitriou, Joyce, et al., "Biology, biochemistry and immunology of carcinoma-associated mucins", Immunology Today, March 1997, pp. 105-107.
60	Tabak, Lawrence A., "In Defense of the Oral Cavity: Structure, Biosynthesis, and Function of Salivary Mucins", Annu. Rev. Physiol., 1995, Vol. 57, pp. 547-564.
61	Muller, Stefan, et al., "High Density O-Glycosylation on Tandem Repeat Peptide from Secretory MUC1 of T47D Breast Cancer Cells", The Journal of Biological Chemistry, June 25, 1999, Vol. 274, No. 26, pp. 18165-18172.
62	Hagen, Kelly G. Ten, et al., "Characterization of a UDP-GalNAc:Polypeptide N-Acetylgalactosaminyltransferase That Displays Glycopeptide N-Acetylgalactosaminyltransferase Activity", The Journal of Biological Chemistry, September 24, 1999, Vol. 274, No. 39, pp. 27867-27874.
63	Bennett, Eric Paul, et al., "Cloning of a Human UDP-N-Acetyl- α -D-Galactosamine:Polypeptide N-Acetylgalactosaminyltransferase That Complements Other GalNAc-Transferases in Complete O-Glycosylation of the MUC1 Tandem Repeat", The Journal of Biological Chemistry, November 13, 1998, Vol. 273, No. 46, pp. 30472-30481.
64	Bennett, Eric Paul, et al., "A novel human UDP-N-acetyl-D-galactosamine:polypeptide N-acetylgalactosaminyltransferase, GalNAc-T7, with specificity for partial GalNAc-glycosylated acceptor substrates", FEBS Letters, 1999, Vol. 460, pp. 226-230.
65	Imberty, Anne, et al., "Fold recognition and molecular modeling of a lectin-like domain in UDP-GalNAc:polypeptide N-acetylgalactosaminyltransferases", Protein Engineering, 1997, Vol. 10, No. 12, pp. 1353-1356.
66	Paulson, James C., et al., "Glycosyltransferases", The Journal of Biological Chemistry, October 25, 1989, Vol. 264, No. 30, pp. 17615-17618.
67	Hassan, Helle, et al., "The Lectin Domain of UDP-N-acetyl-D-galactosamine:Polypeptide

Examiner
SignatureDate
Considered

BEST AVAILABLE COPY

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/B/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(Use as many sheets as necessary)</i>			Complete if Known		
			Application Number	10/705,401-Conf. #4414	
			Filing Date	November 10, 2003	
			First Named Inventor	Henrik Clausen	
			Art Unit	N/A	
			Examiner Name	N/A	
Sheet	5	of	5	Attorney Docket Number	04305/100H154-US2

		Nacetyl galactosaminyltransferase-T4 Directs Its Glycopeptide Specificities", The Journal of Biological Chemistry, December 8, 2000, Vol. 275, No. 49, pp. 38197-38205.	
	68	Hagen, Fred K., et al., "Structure-Function Analysis of the UDP-N-acetyl-D-galactosamine:Polypeptide N-acetyl galactosaminyltransferase", The Journal of Biological Chemistry, March 5, 1999, Vol. 274, No. 10, pp. 6797-6803.	
	69	Amado, Margarida, et al., "Identification and characterization of large galactosyltransferase gene families: galactosyltransferases for all functions", Biochimica et Biophysica Acta, 1999, Vol. 1473, pp. 35-53.	
	70	Amado, Margarida, et al., "A Family of Human B3-Galactosyltransferases", The Journal of Biological Chemistry, May 22, 1998, Vol. 273, No. 21, pp. 12770-12778.	
	71	Zanetta, Jean-Pierre, et al., "Massive in vitro synthesis of tagged oligosaccharides in 1-benzyl-2-acetamido-2-deoxy- α -D-galactopyranoside treated HT-29 cells", Glycobiology, 2000, Vol. 10, No. 6, pp. 565-575.	
	72	Altschuler, Yoram, et al., "Clathrin-mediated Endocytosis of MUC1 is Modulated by Its Glycosylation State", Molecular Biology of the Cell, March 2000, Vol. 11, pp. 819-831.	
	73	Kingsley, David M., et al., "Three Types of Low Density Lipoprotein Receptor-deficient Mutant Have Pleiotropic Defects in the Synthesis of N-linked, O-linked, and Lipid-linked Carbohydrate Chains", The Journal of Cell Biology, May 1986, Vol. 102, pp. 1576-1585.	
	74	F. Ulloa, "Benzyl-N-acetyl- α -D-galactosaminide induces a storage disease-like phenotype by perturbing the endocytic pathway", J. Biol. Chem. 2003 Apr. 4; 278(14):12374-83 (Abstract)	
	75	Leteurtre, E., et al. "Induction of a storage phenotype and abnormal intracellular localization of apical glycoproteins are two independent responses to GalNAc α -O-bn." J. Histochem. Cytochem. 2003 Mar; 51(3):349-61 (Abstract)	

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹Applicant's unique citation designation number (optional). ²Applicant is to place a check mark here if English language Translation is attached.

BEST AVAILABLE COPY

Examiner
SignatureDate
Considered